H-3103-1 - FEES, RENTALS, AND ROYALTY

Calculation of Sliding Scale Royalty for Production

Above and Below 30° Baume

Calculation of Sliding-Scale Royalty for Production Above and Below 30° Baume

Since industry computes all gravities on the API method, 30° Baume should be considered the same as 30° API for royalty purposes (30° Baume equivalent to 30.2° API). Calculations should be made as follows:

A. Review the individual runs and determine if the average gravity of the run was below or above 30° API.

B. Compute the royalty quantity on total lease production from all runs at the applicable rates for oil less than 30° API gravity.

C. Compute the royalty quantity on the total lease production at the applicable rates for oil 30° API gravity and over.

D. Multiply the royalty quantity obtained under each of the foregoing computations by the percentage of production of each gravity oil (above 30° and below 30°) to the total production.

E. Add the product of each calculation obtained from the above and divide by the total production to obtain the average royalty rate for the month.

F. The computed rate is then applied to the total lease production or, in the case of unitized leases, to the production allocated to the sliding-scale royalty tract.

Example 1:

A sliding-scale (Schedule D) lease with 16 countable wells produced a total of 17,728.65 barrels of crude oil during December. Crude oil gravity of runs was both above and below 30° API.

14,812.98 Barrels over 30° gravity = 83.55391% total production
2,915.67 Barrels under 30° gravity = 16.44609% total production
17,728.65 Barrels total production

20 bbls./day/well x 31 days x 16 wells = 9,920 bbls. @ 1/8 royalty

17,728.65
9,920.00
7,808.65 bbls. at higher than 1/8 royalty

7,808.65 divided by 31 days divided by 16 wells = 15.74 bbls/day/well
Total production = 20 + 15.74 = 35.74 bbls/day/well; therefore, approximate royalty for remaining 7,808.65 bbls. is 16 2/3% or 14 2/7% depending on gravity.

H-3103-1 - FEES, RENTALS, AND ROYALTY

Calculation of Sliding Scale Royalty for Production

Above and Below 30° Baume

@ Royalty 1/8 : 1/8 x 9920.00 = 1240.00 royalty bbls.
@ Royalty 1/6 (30°+) : 1/6 x 7808.65 = 1301.44 royalty bbls.
@ Royalty 1/7 (30°-) : 1/7 x 7808.65 = 1115.52 royalty bbls.

83.55391% x (1240 + 1301.44) = 2123.47 royalty bbls.
16.44609% x (1240 + 1115.52) = 387.39 royalty bbls.
2510.86 total royalty bbls.

2,510.86
17,728.65 = 14.16272% effective royalty rate

Example 2:

Total unit production is 1,273,531.65 bbls. (gravity 30° or over) in August (31 days), 164 wells.

Lease participation factor is 0.0076918

No. Wells		No. Days		Well Days		Bbls.		Bbls/Step		Royalty Rate		Bbls/Royalty Rate
164	x	31	=	5084	x	20	=	101,680	x	12 1/2%	=	12,710
164	x	31	=	5084	x	30	=	152,520	x	16 2/3%	=	25,420
164	x	31	=	5084	x	50	=	254,200	x	20%	=	50,840
164	x	31	=	5084	x	100	=	508,400	x	25%	=	127,100
---		--		-----		---		256,731.65	x	33 1/3%	=	85,577.22
								1,273,531.65				301,647.22

301,647.22 x .0076918 = 2,320.21 royalty bbls.
1,273,531.65 x .0076918 = 9,795.75 total lease bbls.

Effective royalty rate = 2,320.21 divided by 9,795.75 = 23.6859%